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CONFIDENTIAL

25X1

Chief, Operations & Training Division, OC 18 March 1957

Chief, Engineering Division, OC

CV-1 Converter

REF : O&T Memorandum (~~56-445 dated 13 August 1956~~) [redacted] request 25X1

1. In accordance with the above request two CV-1 Convertors, Serial #123 and #124, were forwarded to MSB on this date. Two copies of the Operating Notes and Instructions were also included.

2. These units differ from those previously delivered in that printed circuitry has been used in construction and a provision has been included to prevent the antenna lead from shorting to the case.

3. In accordance with earlier [redacted] discussion, the tuning capacitor knob was not changed on this model. The capacitor used represents the best compromise between reliability, economy, and desired dimensions that is available to date. Stock units of some twenty to twenty-five companies were reviewed early in the program without success. The capacitor used is designed for trimmer applications and is intended for screwdriver control. It is constructed from very thin silvered ceramic discs which rather extensive testing has proved to be far too fragile to withstand the side thrust applied, even in careful usage, when the point of application is extended much beyond that now used. It is for this reason that the present recessed-bar type knob is supplied. The use of this capacitor in prototype units may be justified; however, the advisability of its continued use in production quantities is subject to serious doubt. 25X1

4. The R&D Laboratory has just completed the testing of a multiple-plate, teflon-dielectric, miniature capacitor supplied by the [redacted] The basic unit is small enough for use in the CV-1, and the results of the tests on the one engineering model indicate promising electrical characteristics. However, the unit is not in production and the company's intentions in this regard are being checked. An additional advantage may accrue from the fact that the range of this capacitor will permit the frequency coverage of the converter to be extended. Further tests will be required to determine whether the full 3 to 12 mcs range will be possible in one unit. 25X1

5. Engineering drawings, specification, and a production prototype are being prepared. It is believed desirable, and from present

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indications possible, to eliminate in the production units the hazard of circuit damage in the event the battery polarity is reversed. A circuit for this purpose is now being tested. With the exception of the final inclusion of this circuit and the solution of the capacitor problem, all of the material essential to external production has been completed.

[redacted] 25X1

R&D/Lab/AJS/jcm (18 March 1957)

Distribution:
Original and 1 - Addressee
1 - R&D Lab Subject
1 - R&D Chrono
1 - OC-E Reading
1 - OC-E Subject
1 - OC-E Chrono
1 - Dev/s
1 - R&D/EP

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OCT 56-445

12 AUG 1956

Chief, Engineering Division, OC

Chief, Operations and Training Division, OC

Request for High Frequency CV-1 converters

1. It is requested that the R&D Laboratory undertake on a low priority basis the construction of 2 CV-1 converters having a frequency range of at least 6 - 12 mcs. The upper range limit should be extended as high as practical.

2. These units should be delivered to OC-OAF/CB for evaluation and test. It is planned to send at least one of these units to [redacted] where an interest has been indicated in a high frequency version of the CV-1.

25X1

[redacted]

25X1

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